

REMARKS

The Applicants have carefully reviewed and considered the Examiner's Action mailed April 8, 2004. Reconsideration is respectfully requested in view of the foregoing amendments and the comments set forth below.

By this Amendment, the specification is revised adding the appropriate U.S. headings, claims 1-19 are editorially amended, and the Abstract set forth on the front page of the WIPO publication is added on a separated sheet. In addition, new claim 20 is presented directed to the exemplary wireless connection set forth in original claim 3. These amendments are minor and are not intended to change the scope of the claims as originally filed. Accordingly, claims 1-20 are pending in the present application.

The claims were objected to because of the informalities noted in the section at the top of page 3 of the Action. By the foregoing amendments to the claims, these informalities have been corrected and withdrawal of the claim objections is requested.

Claims 3 and 13 were rejected under 35 U.S.C. §112, second paragraph for the reasons set forth at the top of page 4 of the Action. As stated above, a new claim 20 is added directed to the subject matter following "such as", which has been deleted from claim 3. With respect to the phrase "substantially the same manner" of claim 13, it is submitted that one of ordinary skill in the art would understand that the remote control device can control the computing means in substantially the same way as a keyboard and mouse combination control the computing means. Accordingly, it is respectfully submitted that claims 3 and 13 are fully definite under 35 U.S.C. §112, second paragraph.

Claims 1, 2, 4-5, 7 10, 15 and 17-19 were rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 5,495,269 to Elrod et al. (hereinafter referred to

as “Elrod”) as explained in paragraph 1 spanning pages 4 - 8 of the Action. This rejection is respectfully traversed.

As explained in the Background of the Invention (Amended pages 1-2) of the present application, existing interactive displays make use of an electronic whiteboard that can sense the position of an electronic pen on the surface of the whiteboard. This type of interactive display enables a teacher to manipulate and annotate material rapidly in response to student questions, for example. However, with displays of known interactive apparatuses, it is difficult to assess a student’s comprehension of the material taught. Accordingly, known apparatuses have shortcomings in the above area and known systems require a cumbersome amount of wiring between various parts of the system.

The claimed invention overcomes the shortcomings of the prior art by providing a an interactive display system comprising a display device, computing means arranged to supply image information to the display device and at least one remote signaling device operable to transmit signals to a receiver portion of the display device where the display device is arranged to supply signals to the computing means, which stores the signals for display, and where the display device is a communications hub of the display system arranged to receive control signals from a pointing device and/or a remote control device and arranged to transmit those signals to the computing means in order to control an image on the display device. In addition to the device claims, Applicants claim a method of operating an interactive display system (claim 15) that positively recites the above features. That is, the display device of the claimed invention (claims 1 and 18) and the method of operating an interactive display system positively recite that the display device is operable to receive control signals and then transmit those signals to a computer means

in order to control an image on the display device.

Elrod is directed to a large area electronic writing system which accurately captures and displays information on an interactive system so that multiple persons may work together for supplying and receiving information. As the Action correctly notes, Elrod discloses a screen 18 in Figure 1. However, contrary to the Action's position at page 5, lines 13-14, elements 12 and 14 of Elrod are not part of the display device; instead, reference numeral 12 is a projection subsystem and reference numeral 14 depicts a receiving subsystem. While "one or more light pens" of Elrod "project a signal towards screen 18", "[T]he light beam from each pen 20 is received by receiving subsystem 14 which conveys information" to computer 16 (column 3, lines 47-51 of Elrod). Thus, the screen 18 of Elrod does not receive control signals and transmit signals to a computing means in order to control an image of the display device. To the contrary, it is clear that Elrod discloses a receiving subsystem, which is not part of the display device, that receives control signals from light pens 20 and the receiving subsystem 14 transmits those signals to a computer 16, which controls a projection subsystem 12 (column 3, lines 43-21 of Elrod). Thus, Elrod fails to disclose a display device that 1) receives signals and 2) transmits those signals to the computer means in order to control an image on the display device, as required by independent claims 1, 15 and 18. Accordingly, Elrod cannot anticipate claims 1, 15, and 18 and any of their depending claims.

In that Elrod teaches against providing a display device with its own receiver to receive control signals from a remote control device, it is respectfully submitted that one of ordinary skill in the art would not have considered modifying Elrod against its own teachings. Accordingly, Elrod, alone, cannot render Applicants' invention unpatentable.

Claims 3 and 6 were rejected under 35 U.S.C § 103(a) as being unpatentable over Elrod in view of U.S. Patent No. 6,414,673 to Wood as explained in paragraph 2 spanning pages 9 - 10 of the Action. Claims 8 and 12 were rejected under 35 U.S.C § 103(a) as being unpatentable over Elrod in view of U.S. Patent No. 5,790,114 to Geaghan et al. (hereinafter referred to as “Geaghan”) for the reasons set forth in paragraph 3 spanning pages 10 - 11 of the Action. Claims 9, 11, 14 and 16 respectively were rejected under 35 U.S.C § 103(a) as being unpatentable over Elrod in view of U.S. Patent No. 4,538,993 to Krumholz as explained in paragraph 4 of the Action, U.S. Patent No. 5,689,562 to Hassan et al. (hereinafter referred to as “Hassan”) as set forth in paragraph 5 spanning pages 11 - 12 of the Action, U.S. Patent No. 5,528,235 to Lin et al. (hereinafter referred to as “Lin”) for the reasons given in paragraph 7 spanning pages 12 - 13 of the Action, and U.S. Patent No. 5,854,621 to Junod et al. (hereinafter referred to as “Junod”) as explained in paragraph 8 of the Action, respectively. Finally, claim 13 was rejected under 35 U.S.C § 103(a) as being unpatentable over Elrod as explained in paragraph 6 of the Action. These rejections are respectfully traversed.

The secondary references are applied for specific features set forth in the depending claims. Wood is directed to a transmitter pen location system. Wood is not concerned with an interactive display system with a display device, at least one remote signaling device and computing means where the display device receives control signals from a remote control device and transmits those signals to the computing means in order to control an image on the display device. Accordingly, there is no motivation to modify either system to achieve Applicants’ invention. Even if one of ordinary skill in the art would combine the large area electronic writing system taught by Elrod with the

transmitter pen location system taught by Wood, Applicants' invention would not result because neither patent document addresses the problem solved by Applicants' invention.

Geaghan was applied for its teachings in Column 7, line 15 directed to the priority to pen contact over finger contact. Consequently, there is no motivation to modify the large area electronic writing system of Elrod to have a display device that receives control signal and transmits the received controls signals to a computing device as set forth in independent claims 1, 15 and 18 of the present invention.

Krumholz was applied for its teaching of an interrupt row that enables a teacher to cut off reception of a particular student computer outputs. This is not concerned with an interactive display system where the display device receives control signal and transmits those control signals to a computing means to control an image on the display device. Accordingly, Krumholz cannot cure the defects of Elrod.

Hassan, Lin and Junod are all directed to inventions that are different from Applicants' claimed invention. None of these references disclose teach or even suggest, an interactive display system with a display device that receives control signal from a remote control device and transmits those signals to a computing means to control an image on the display device. Accordingly, these secondary references cannot provide the missing motivation to modify Elrod as they are directed to technological different systems.

In view of the foregoing amendments and the comments distinguishing the claimed invention from the prior art of record, it is believed that claims 1-20 are allowable over the prior art of record and Applicants request withdrawal of the above rejections. Accordingly, it is respectfully requested that a Notice of Allowance be issued

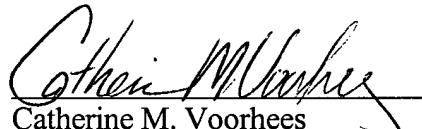
indicating that claims 1-20 are allowed over the prior art of record.

A request for the necessary extension in the period for filing this response is attached. The Commissioner is authorized to charge the 3-month extension fee of \$490.00 (small-entity) to Deposit Account No. 22-0261. If a greater or lesser fee is required, the Commissioner is authorized to charge Deposit Account No. 22-0261 and advise us accordingly.

Should the Examiner believe that a conference would advance the prosecution of this application, the Examiner is encouraged to telephone the undersigned counsel to arrange such a conference.

Respectfully submitted,

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ABSTRACT OF THE DISCLOSURE

An interactive display system comprises a white board which communicates with a PC. A projector receives signals from the PC which are translated into corresponding projection image which is projected on to the white board. The image projected on to the white board is the same as that shown on a computer screen. By using an electronic pen the position of which can be detected electronically by means of a plurality of wires embedded beneath the surface of the white board and using methods already known in the art, the electronic pen can function the same way as a computer mouse. The image projected on to the white board may also be manipulated by means of a remote control device, which uses infra red communication to transmit signals to a transponder built within the white board.